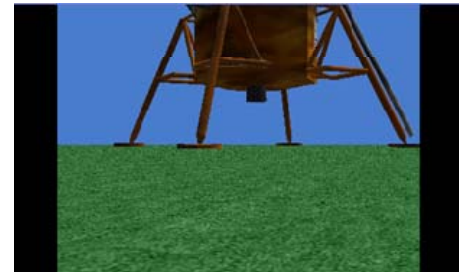
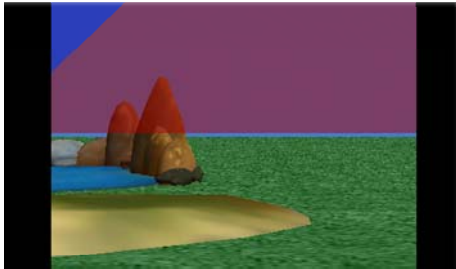


Scene changes



By Deborah Nelson
(thanks to Henry Qin for developing the Scene Change class.)

Duke University
Under the direction of
Professor Susan Rodger
July 2008

Overview

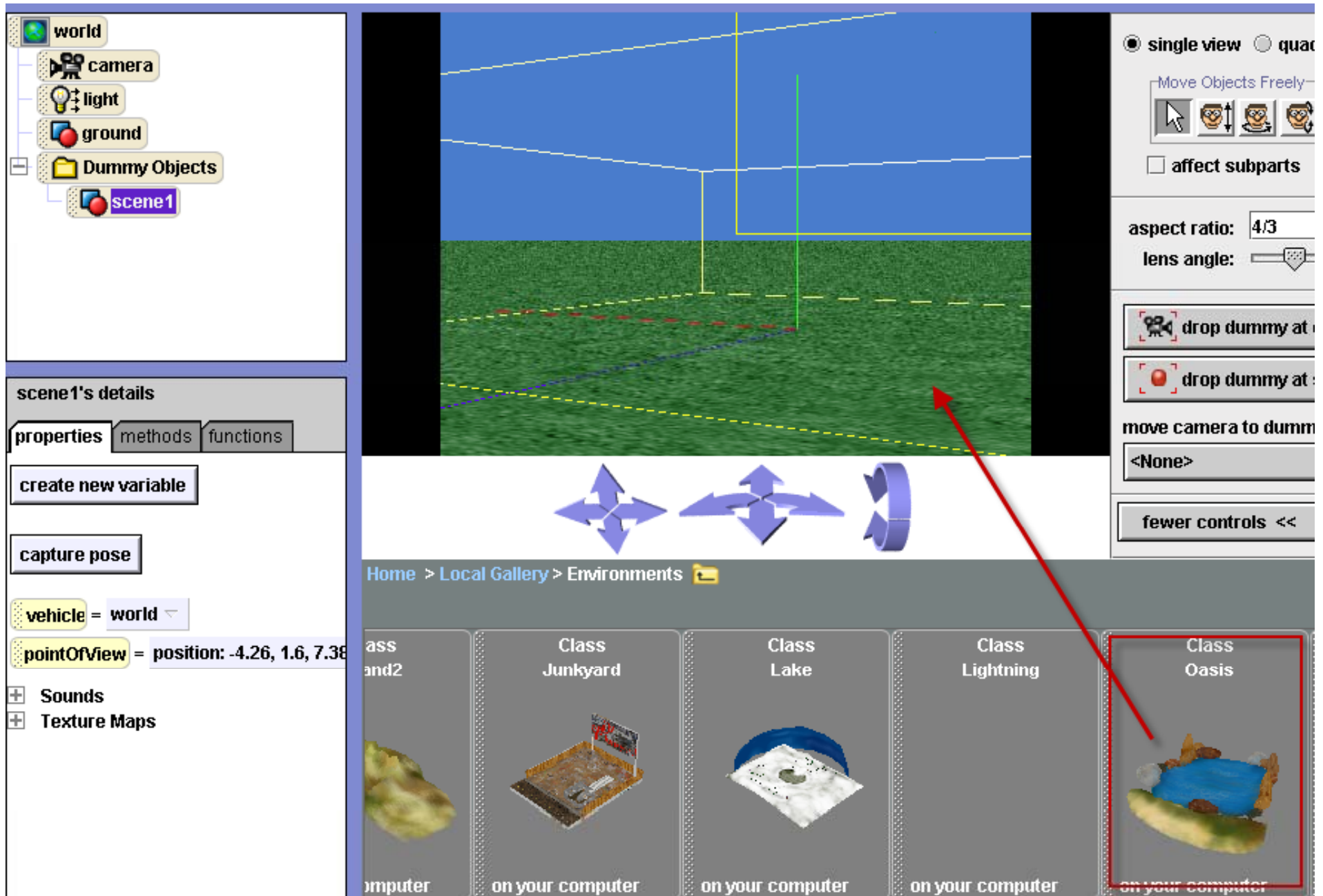
- This tutorial teaches you
 - How to switch between different ground templates (example, from sand to water to space),
 - To do this, we will add a special ground (ground2) that has all the ground textures stored in it.
 - How to set up different scenes in different locations in your Alice world
 - How to fade out (go to black) and fade back in.

Load world

- Open a new world, with any template
- Save it in a directory that you can find again,
- After you have opened the file go into the "Layout" mode by clicking on the green button **Add Objects** (toward the middle of screen)
- Overview: creating scene changes, we will
 - Add objects
 - Drop dummy objects at camera positions
 - Write two methods for transition of fading in and out from scenes

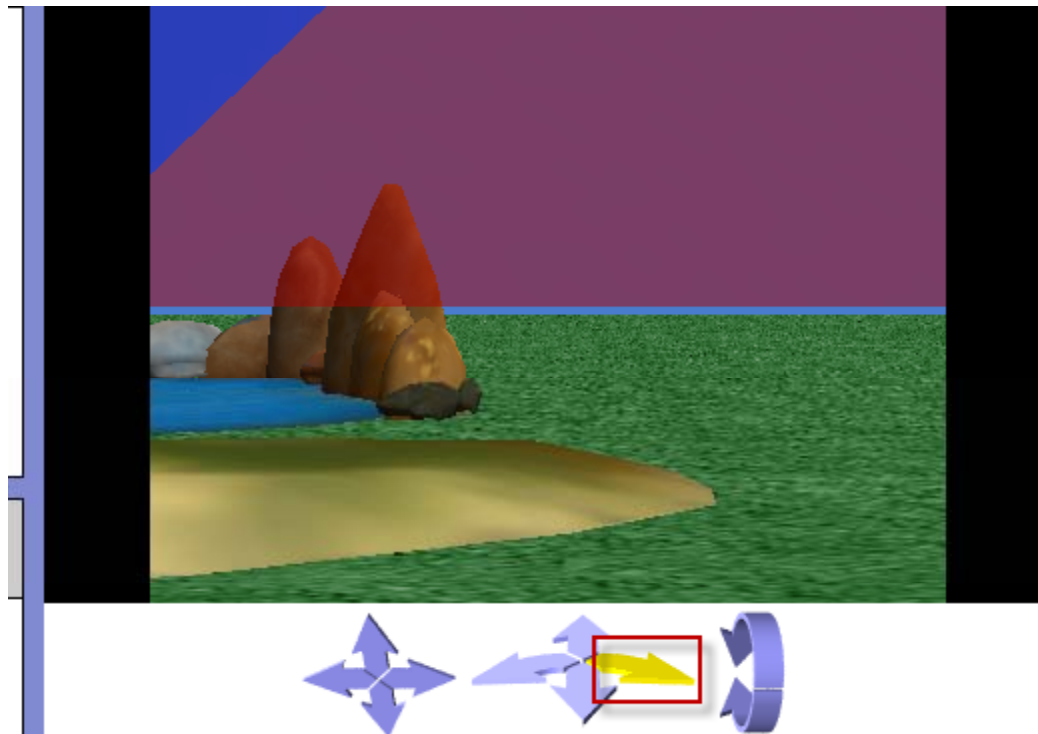
Part One: Set up

- Click **more controls**. Click **drop a dummy at the camera**.
- In the object tree, expand the Dummy Objects folder. Rename the dummy 'scene1.' (by right clicking on it and selecting rename)
- Go to the **Environments** folder.
- Scroll over to **Oasis**. Drag **Oasis** into the scene.
- See the screenshot on the next slide for an illustration



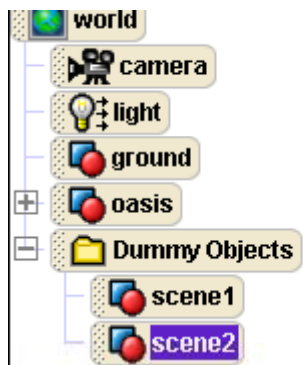
Move the camera over

- Once the oasis is in your scene, use the camera position arrow to move the camera view, until you can no longer see the oasis



Drop dummy at camera

- When you can no longer see the oasis, drop a dummy at the camera.
- In the object tree, rename this dummy 'scene2'
- In the Environments folder, scroll over to **Island** Drag **Island** into the scene
- See the screenshot on the next slide for an illustration



scene2's details

properties | methods | functions

create new variable

capture pose

vehicle = world

pointOfView = position: -4.56, 1.6, 7.52

+ Sounds

+ Texture Maps

single view | quad view

Move Objects Freely

affect subparts

aspect ratio: 4/3

lens angle: [slider]

drop dummy at camera

drop dummy at selected object

move camera to dummy: <None>

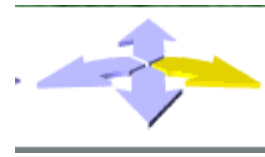
fewer controls <<

Home > Local Gallery > Environments

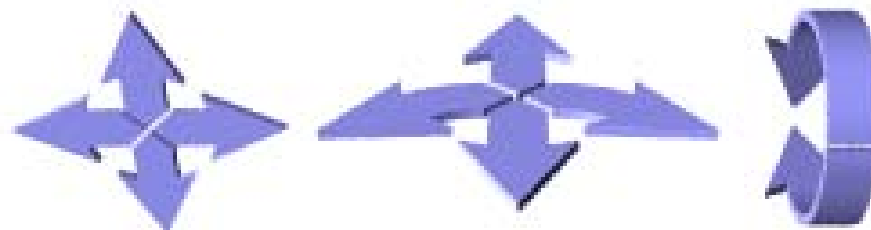
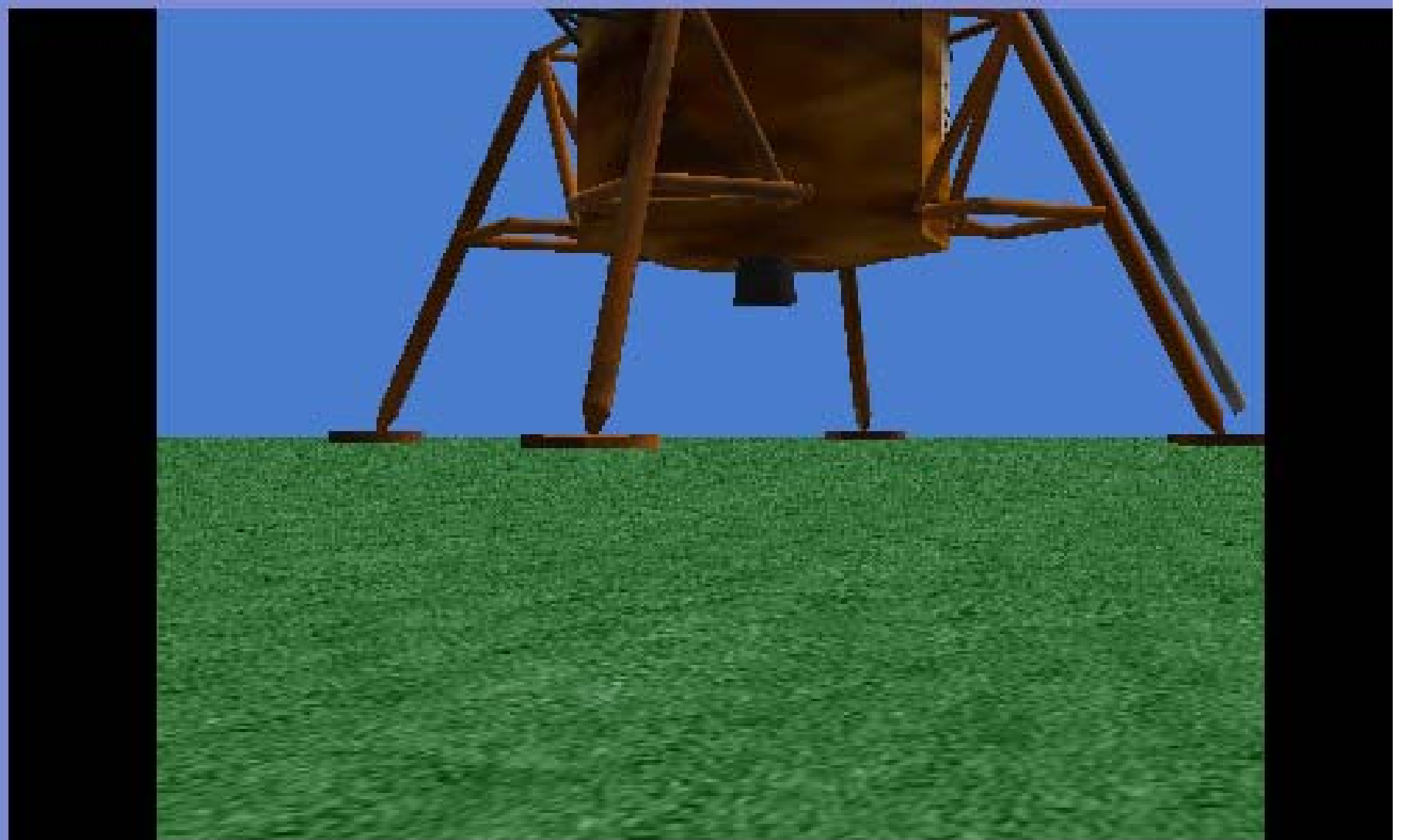
Search

Class Hedgemaze	Class Hedgemaze2	Class Hedgemaze3	Class Hill	Class Island
on your computer	on your computer	on your computer	on your computer	on your computer

- Move the camera over (to the right) until you can no longer see the island.
- Drop a dummy at the camera
- In the object tree, rename it “scene3”.
- Go to the **Space** Folder

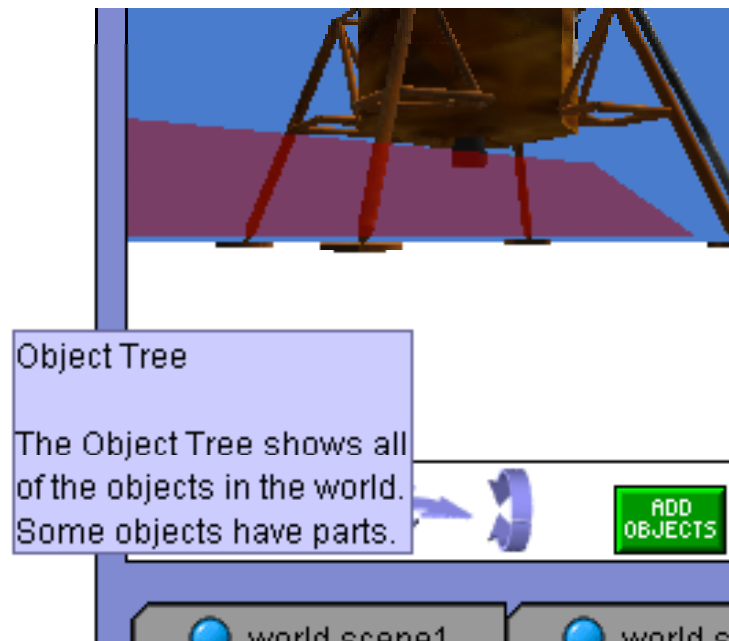
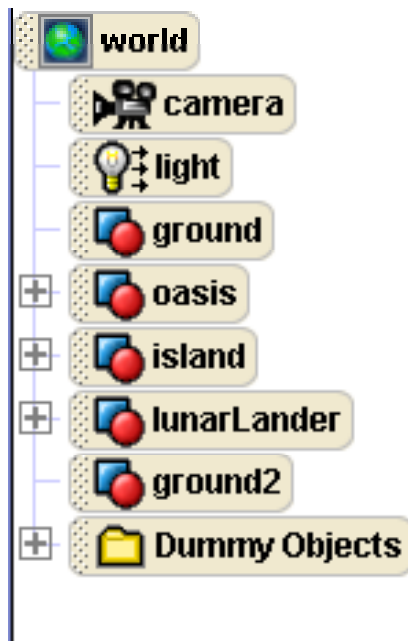


- Drag **lunarLander** into the scene, but barely in.
- Before you release the mouse to drop it into the scene, hold down the shift key on your keyboard. Continue to drag the obj.
- If you're on a PC, you will see the yellow bound box move up because shift makes your object move up as you drag it in
- See the screenshot in the next slide for a illustration of where my lunarLander is positioned



Import superGround.a2c

- There is a superGround.a2c linked to the website you got this tutorial from. Save it in a directory you can find again
- In Alice, Import the superGround.a2c by going to File – import.
- It is ground2 in the object tree. The ground should be white now



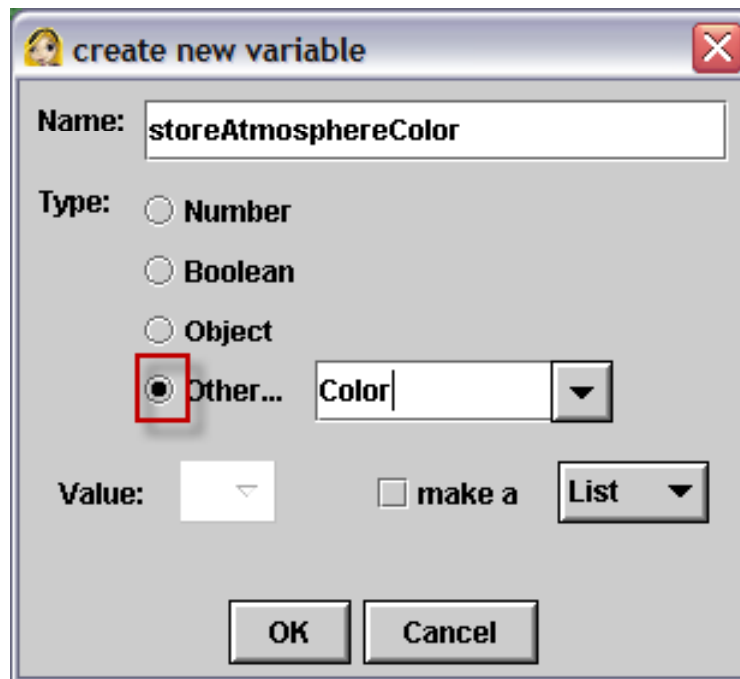
Trouble with two grounds?

- Having two grounds can cause problems, especially on a Mac. If you don't see a white ground, then you may want to try to fix it in one of several ways.
 - Make the old ground invisible
 - OR delete the old ground (make sure no refs to it)
 - OR move the old ground down 200M out of site

Part Two: Writing methods

- Click on the **Done** button to go back to the method editor
- In the world detail pane, click world properties, then “create new variable”. (Essentially you are creating a new property)
- Name the variable/property **‘storeAtmosphereColor’**
- Select type Other and select color, then click ok
- Make another color variable. Name it **‘storeAmbientLightColor’**.
- See the screenshot on the next slide for an illustration

The color property variables



create new variable

Name:

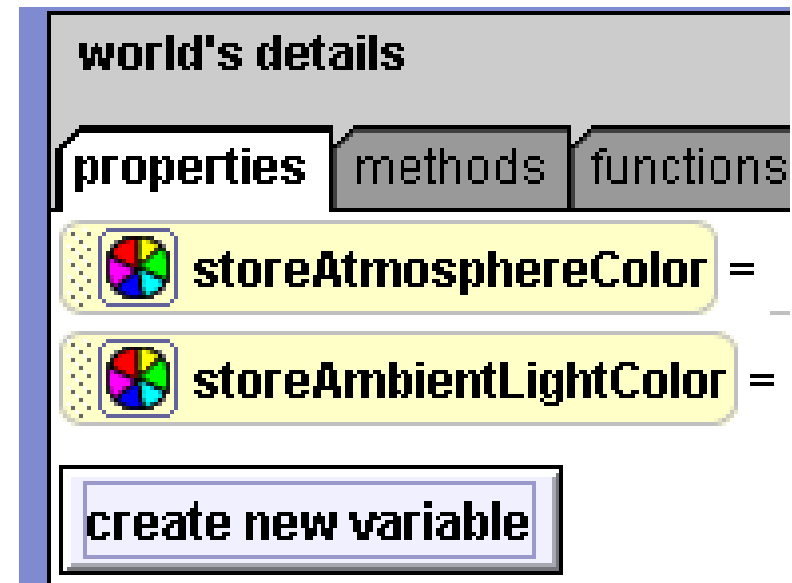
Type:

- ☐ Number
- ☐ Boolean
- ☐ Object
- ☒ Other...

Value:


☐ make a


OK Cancel



world's details

properties methods functions

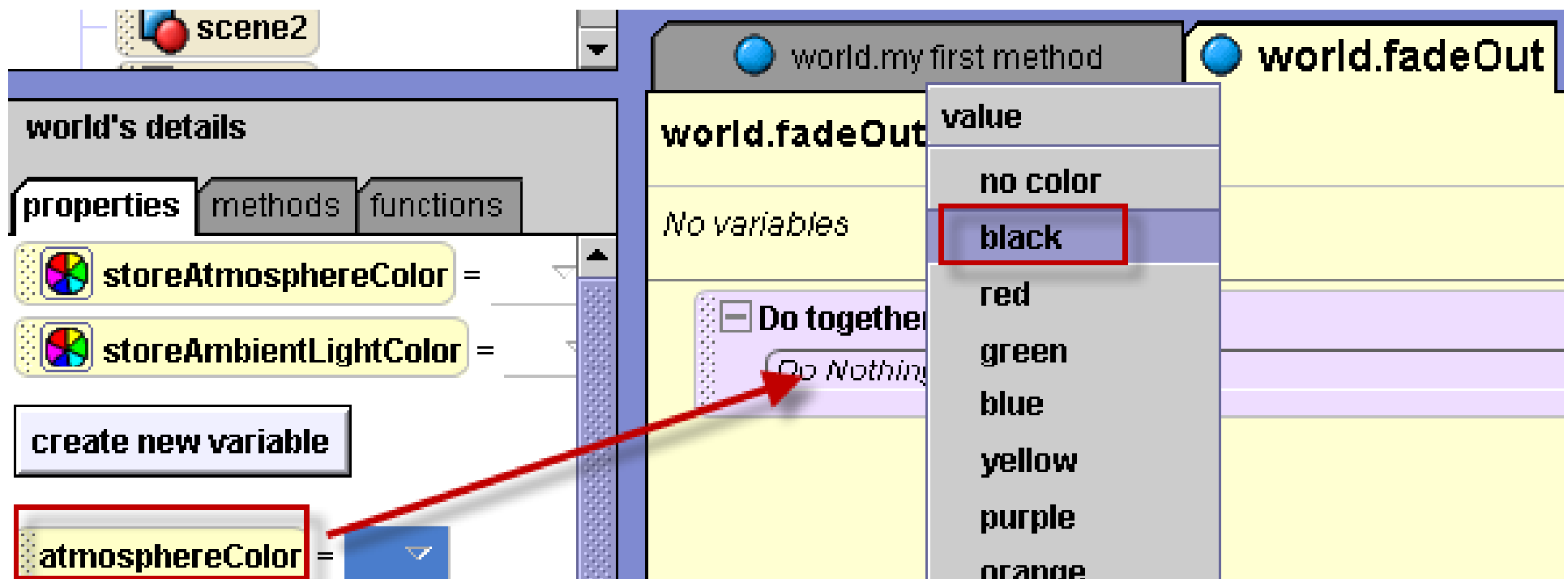
 storeAtmosphereColor =

 storeAmbientLightColor =

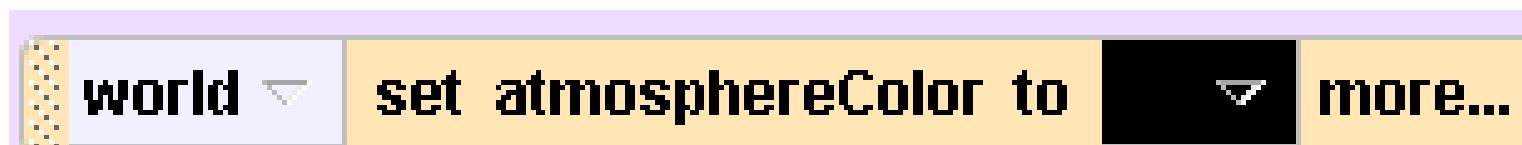
create new variable

Write fadeOut method

- Create a new world method named fadeOut
- Drag in a do together from the bottom of the window
- Click on the properties tab in the world details pane
- Drag atmosphereColor into the fadeOut method. Set value to black
- See the screenshot on the next slide for an illustration

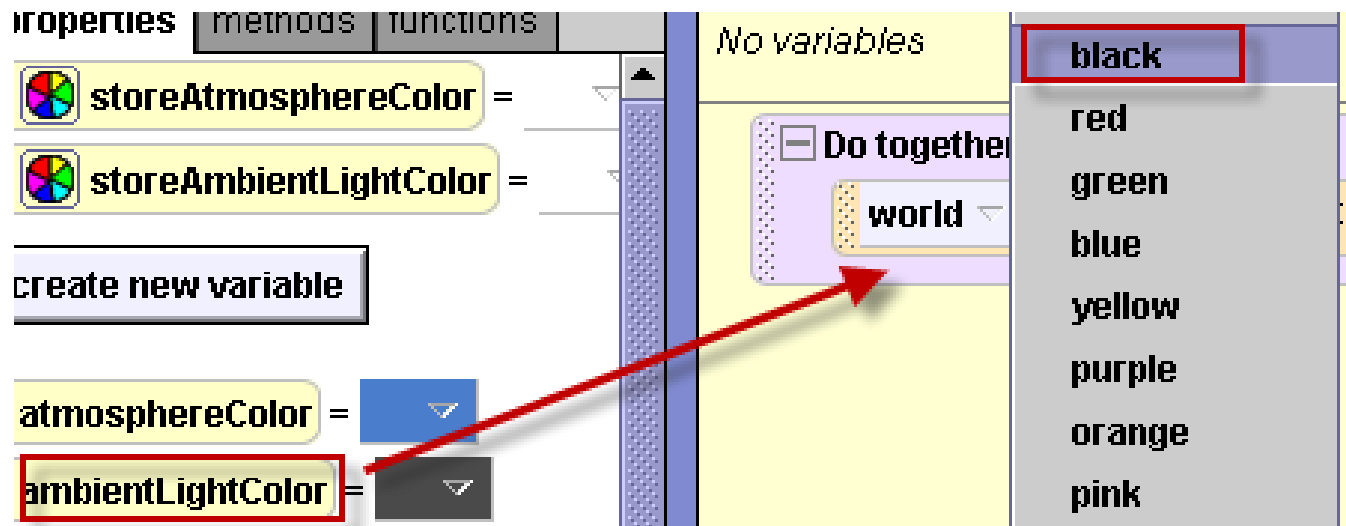


- Resulting code:



fadeOut Method (cont)

- Drag ambientLightColor into the do together .
Set value to black



- Resulting Code:



- Click on the light object in the object tree.
From the properties tab, drag brightness into the fadeOut method. Select Other and set value to 0
- Here is the complete method:

The image shows a software interface with two main panels. The left panel, titled "light's details", has three tabs: "properties", "methods", and "functions". The "properties" tab is active, showing a "create new variable" button, a "capture pose" button, and three property fields: "color" (empty), "brightness" (set to 1), and "range" (set to 256 meters). The right panel, titled "world.fadeOut No parameters", shows a script editor with a "Do together" block containing three actions: "world" set atmosphereColor to (black) more..., "world" set ambientLightColor to (black) more..., and "light" set brightness to 0 more....

light's details

properties methods functions

create new variable

capture pose

color =

brightness = 1

range = 256 meters

world.fadeOut No parameters

No variables

Do together

- world set atmosphereColor to (black) more...
- world set ambientLightColor to (black) more...
- light set brightness to 0 more...

- To test the fadeOut method, in the events panel, change the 'myfirstmethod' to fadeOut
- Play your world

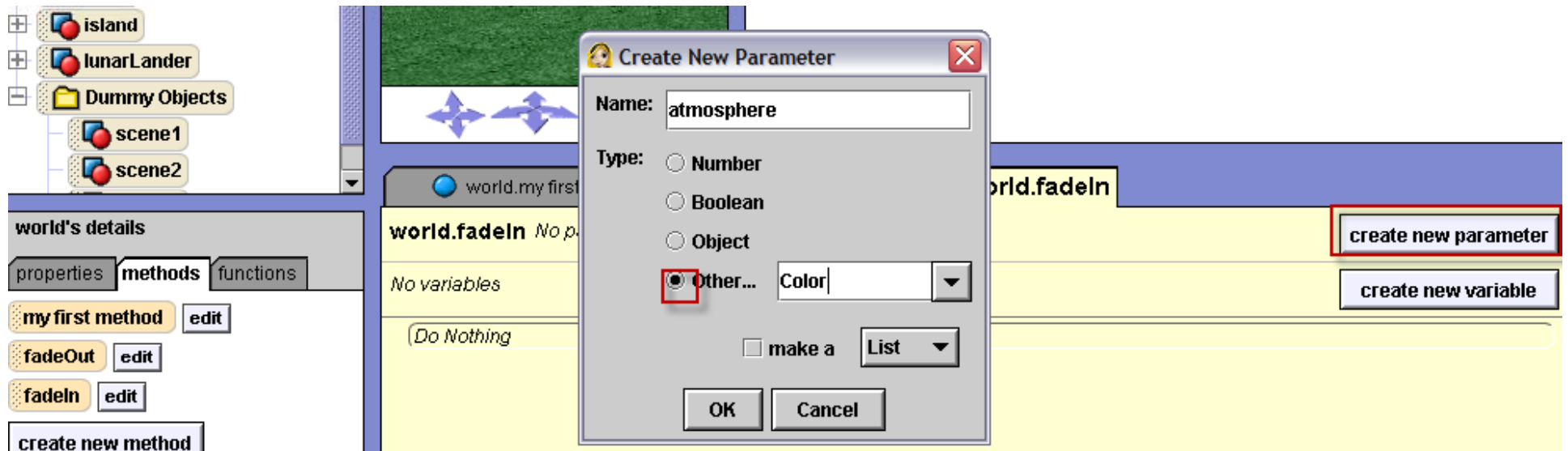


- The screen should fade to be completely black



Write fadeIn method

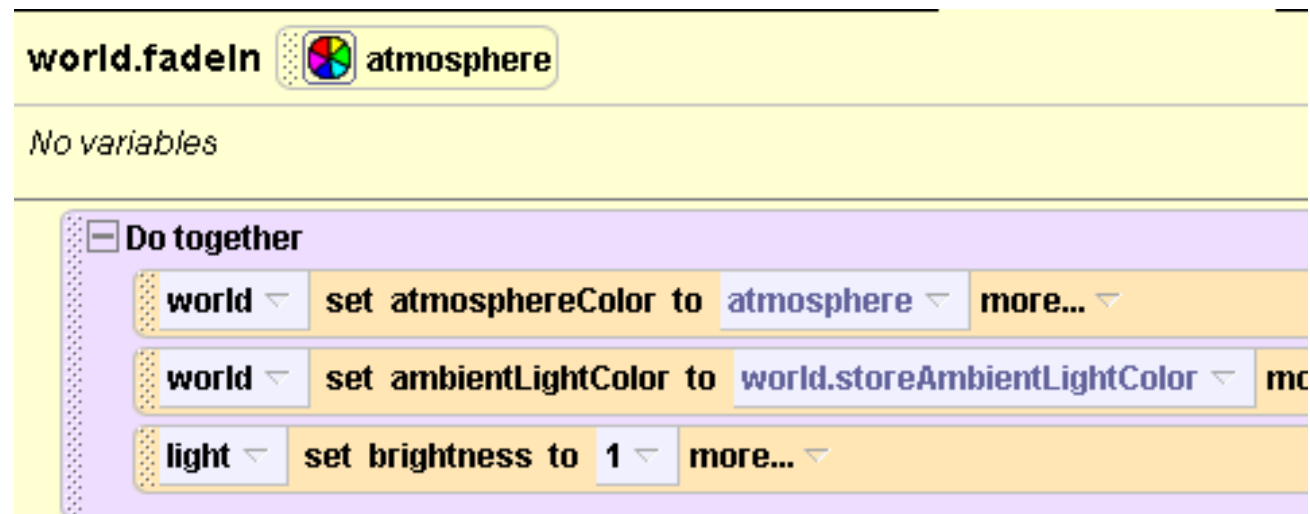
- Click on world in the object tree, then the methods tab in the **world** details pane. Create a new world method. Name it 'fadeIn'
- Click create new parameter in the method. Name it 'atmosphere'. Select type color



- Drag in a do together
- Click on the properties tab in the world details pane.
- Drag atmosphereColor into the fadeIn method. Set value to expressions, select the parameter, atmosphere.
- Resulting code:

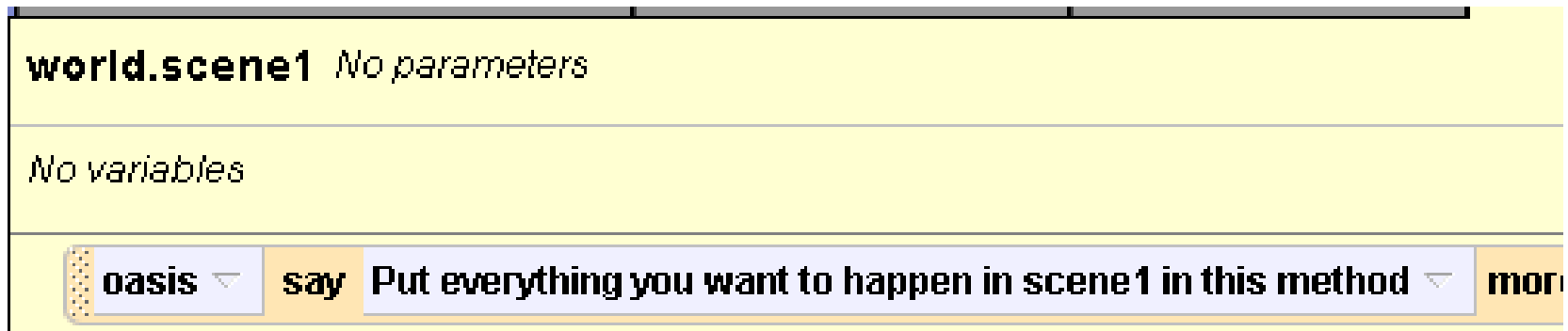


- Drag “ambientLightColor” into the fadeOut method. Set value to expressions, select “storeAmbientLightColor”
- Click on light in the object tree
- In the properties tab, drag “brightness” into the method. Set value to 1.
- Resulting code:



Write scene one method

- Click on world in the object tree and click on the methods tab
- Create a new method: name it scene1
- Drag the Oasis' "say" method into the scene1 method. Select Other and type – "Put everything you want to happen in scene1 in this method"



Write scene two method

- Create new world method: name it scene2
- Drag the Island' say method into the scene2 method. Select Other and type – “Put everything you want to happen in scene2 in this method”

world.scene2 *No parameters*

No variables

island ▾ say Put everything you want to happen in scene2 in this method ▾ more...

Write scene three method

- Create new world method: name it scene3
- Drag the Lunar Lander's say method into the scene3 method.
- Select Other and type – “Put everything you want to happen in scene 3 in this method”

world.scene3 *No parameters*

No variables

lunarLander ▾

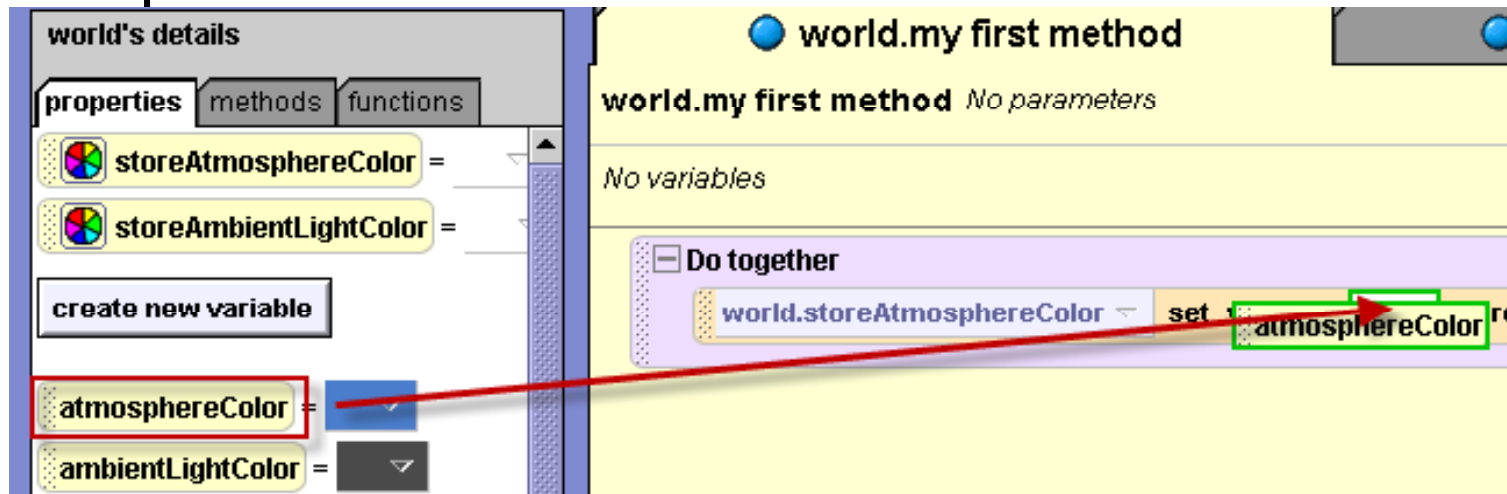
say

Put everything you want to happen in scene3 in this method ▾

mor

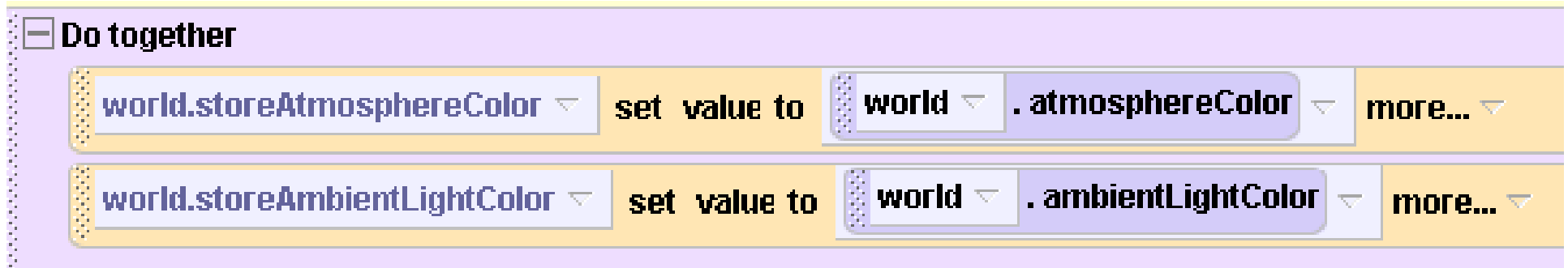
In world.my first method: Store the initial properties

- Click on the world.my first method tab.
- Drag in a do together
- Drag the color property variable 'storeAtmosphereColor' into the do together
- Set value to "no color". Drag atmosphereColor from the pane on to the blank.



Store the initial propertie values

- Drag the color variable “storeAmbientLightColor” into the do together and set value to “no color”.
- Drag ‘ambientLightColor” from the pane onto the blank
- Resulting code:



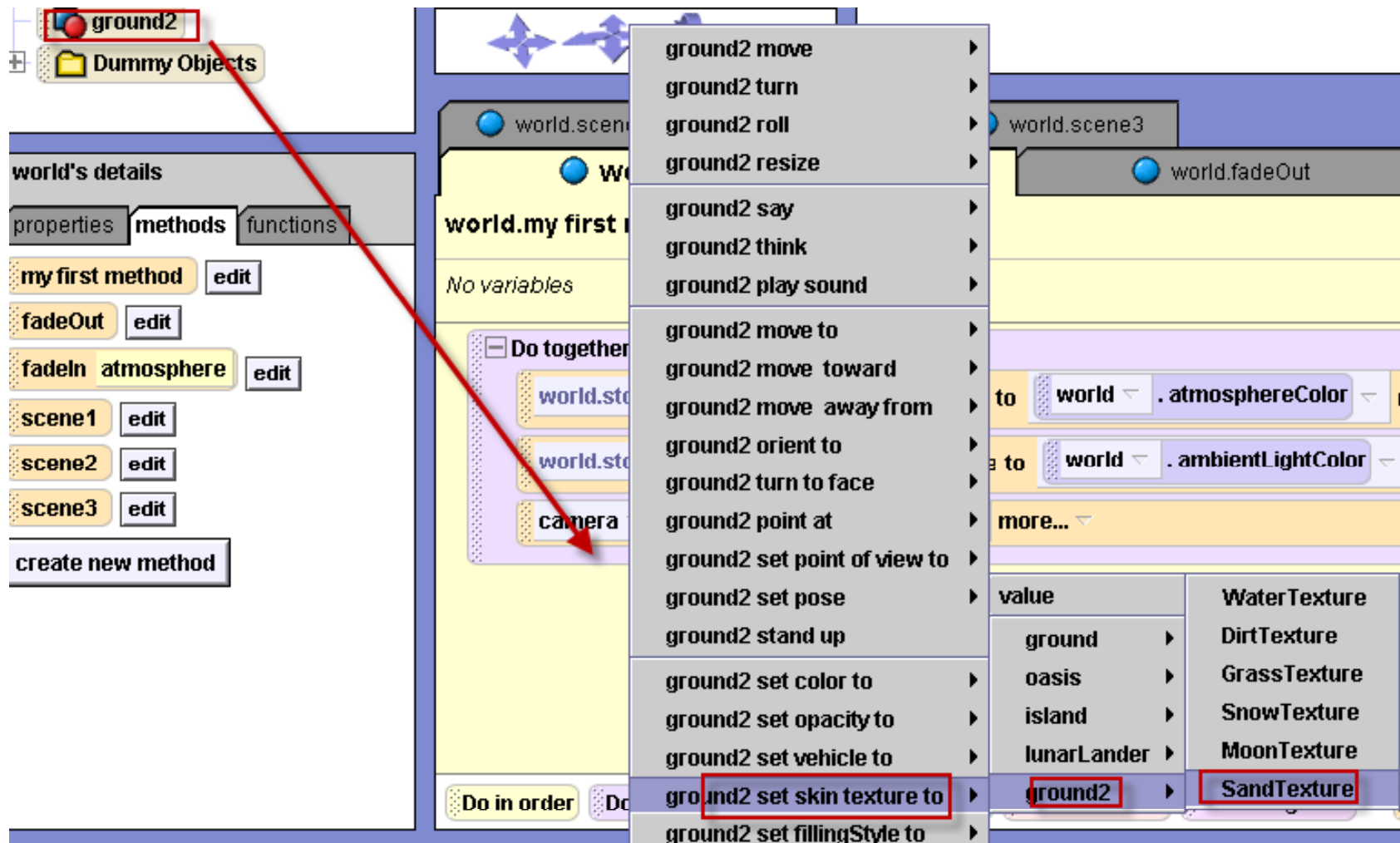
Scene change: Camera

- Click on the camera in the object tree
- Drag the camera “set point of view to” method into the do together. Select Dummy Objects, select scene1

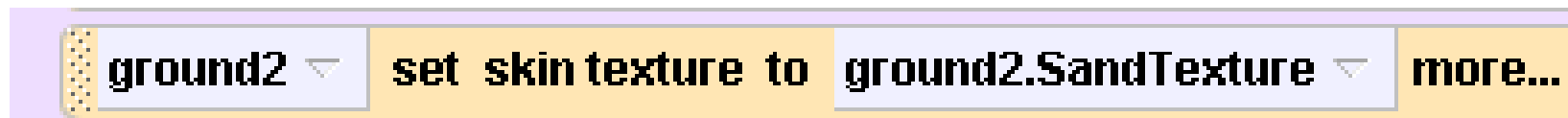


Scene change:Ground2

- Click on ground2 in the object tree.
- Drag it into the do together and select the “set skin texture to” method
- Select ground2
- Select SandTexture
- See the screenshot on the next slide for an illustration

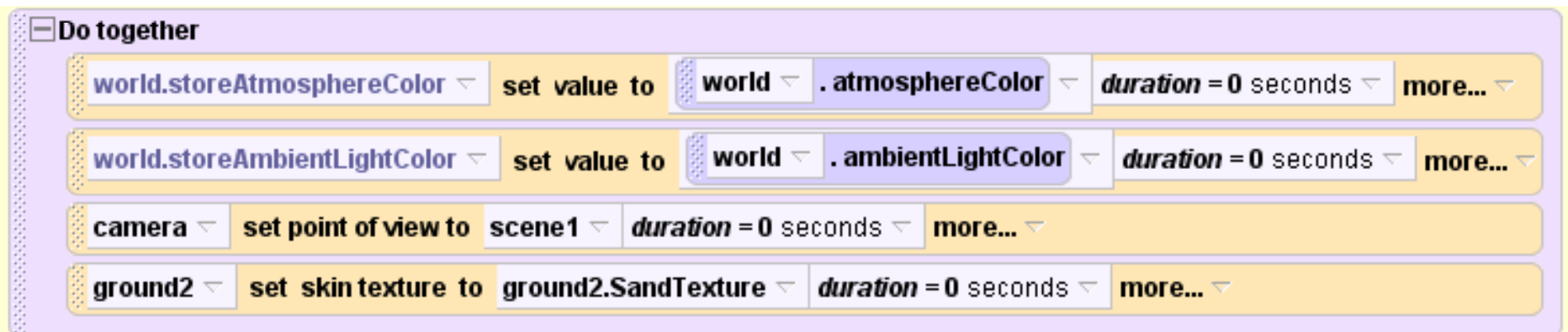


- Resulting code:

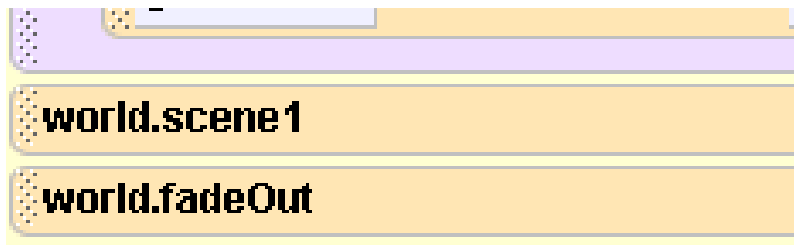


Set to Happen Quickly

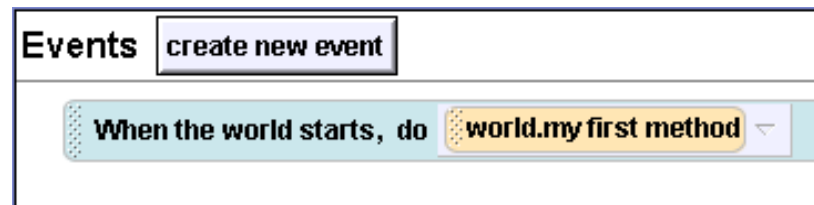
- This first code stores current atmosphere and ambient light colors, changes the camera to look at scene 1 and changes the ground texture to sand.
- All this should happen instantly so the Alice world starts looking at the oasis on sand. To do this, add duration=0 to all four of the lines in the Do Together.



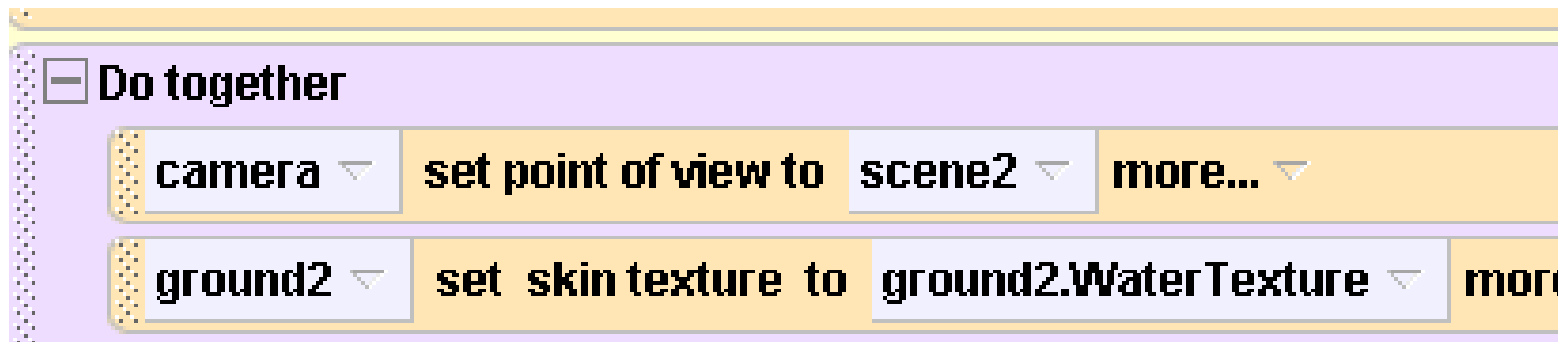
- Click on the methods tab in the world details pane
- Drag the scene1 method into world.my first method, *underneath* the do together
- Then drag in the fadeOut method



- To play your world, remember to change the event back to world.my first method



- Drag in a new “do together” from the bottom of the window
- In the “do together”:
 - Set the camera point of view to (dummy object) scene2
 - Set the ground2 skin texture to waterTexture



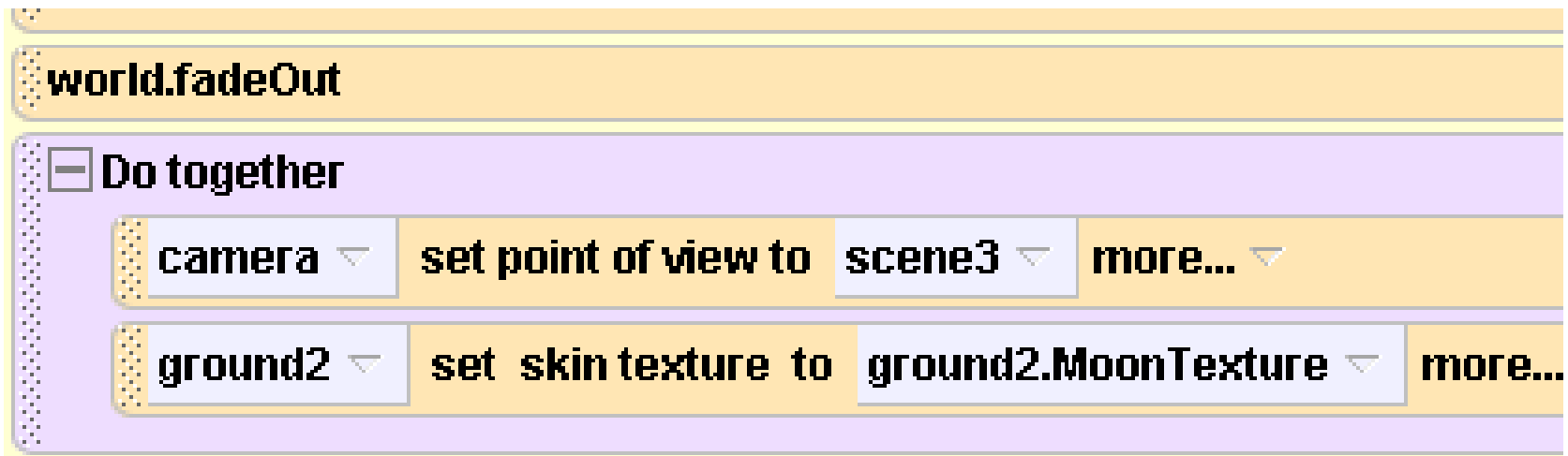
- Underneath the do together, drag in the fadeIn method. For the parameter, select expressions, select the variable “storeAtmosphereColor”
- Then drag in the scene2 method

```
world.fadeIn atmosphere = world.storeAtmosphereColor ▾
```

```
world.scene2
```

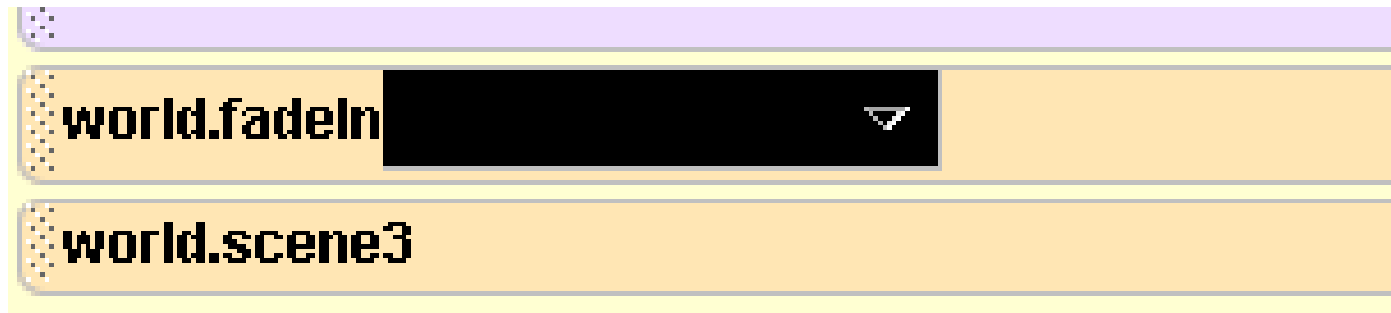
- Play your world

- Drag in the fadeOut method underneath the do together
- Drag in a new do together from the bottom of the window
- In the do together:
 - Set the camera point of view to (dummy object) scene3
 - Set the ground2 skin texture to MoonTexture



Finish myFirstMethod

- Underneath the “do together”, drag in the fadeIn method
- For the parameter, select black (because the atmosphere is black in space)
- Drag in the scene3 method



- See the complete method on the next slide.
- Play your world

world.my first method *No parameters*

create new parameter

No variables

create new variable

[-] Do together

world.storeAtmosphereColor ▾ set value to world ▾ . atmosphereColor ▾ duration = 0 seconds ▾ more... ▾

world.storeAmbientLightColor ▾ set value to world ▾ . ambientLightColor ▾ duration = 0 seconds ▾ more... ▾

camera ▾ set point of view to scene1 ▾ duration = 0 seconds ▾ more... ▾

ground2 ▾ set skin texture to ground2.SandTexture ▾ duration = 0 seconds ▾ more... ▾

world.scene1

world.fadeOut

[-] Do together

camera ▾ set point of view to scene2 ▾ more... ▾

ground2 ▾ set skin texture to ground2.WaterTexture ▾ more... ▾

world.fadeIn atmosphere = world.storeAtmosphereColor ▾

world.scene2

world.fadeOut

[-] Do together

camera ▾ set point of view to scene3 ▾ more... ▾

ground2 ▾ set skin texture to ground2.MoonTexture ▾ more... ▾

world.fadeIn ▾

world.scene3

Recap

- A fadeOut and fadeIn method are used for transitions
- The camera position and ground texture are set for each scene
- To simplify world.myFirstMethod, a separate method is written for each scene
- This space scene is a little different than the others, always fadeIn with black. All other scenes need to fade in with the original atmosphere color.